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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/761,261

Applicant(s)

ITO, WATARU

Examiner

DAVID P. RASHID

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

[1] All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

[2] This office action is responsive to Amendment in Response to Non-Final Office Action received on July 21, 2008. Claims 2-19 remain pending; claim 20 new.

Claim Rejections - 35 U.S.C. § 102

[3] The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

[4] **Claims 19-20** are rejected under 35 U.S.C. § 102(c) as being anticipated by U.S. Pub. No. 2003/0215114 (filed May 13, 2003; hereinafter "Kyle"). Kyle priority to Prov. App. No. 60/381905 (filed May 20, 2002)

Regarding **claim 19**, Kyle discloses a personal authentication apparatus (fig. 5) for authenticating a user ("user's identity" at para.0019), comprising:

a memory (e.g., fig. 7, items 15, 34) storing a face-picture ("passenger's facial template" at para.0080 for passport matching) of the user ("user's identity" at para.0019) therein;

an image pickup unit (fig. 4, item 22) taking a face-picture (*e.g.*, fig. 8) of said user ("user's identity" at para.0019);

a particular person comparing unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) comparing ("Verify Face to Passport" at fig. 10) said user's face-picture (*e.g.*, fig. 8) taken by said image pickup unit (fig. 4, item 22) with a face-picture of a particular person of interest (the passport comparison is of a "particular person of interest" at the airport), wherein the stored face-picture of the user ("passenger's facial template" at para.0080 for passport matching) is different from the stored-face-picture of the person of interest (the stored passport database used for comparison at fig. 10), outputting as comparison result a degree of similarity therebetween ("YES", "NO" after "Does Face match Passport ?" at fig. 10), and deciding whether said degree of similarity is determined (the decision is made at fig. 10, said decision is inherently higher than a predetermined value);

a personal picture acquiring unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) for acquiring the face-picture of the user ("passenger's facial template" at para.0080) from said memory (*e.g.*, fig. 7, items 15, 34); and

an authentication unit (fig. 2, item 20; fig. 5, item 25), when said degree of similarity is determined (the decision is made at fig. 10 above), determining whether or not said user's face-picture taken by the image pick-up unit is identical with the stored face-picture of the user by a first method (the first method going from ("YES" " after "Does Face match Passport ?" at fig. 10 proceeds directly to searching the watch list), and when said degree to similarity is lower ("NO" " after "Does Face match Passport ?" at fig. 10) than said degree of similarity (the decision is made at fig. 10, said decision is inherently higher than a predetermined value), determining

whether or not said user's face picture taken by the image pick-up unit is identical with the stored face picture of the user by a second method (the second method going from ("NO" " after "Does Face match Passport ?" at fig. 10 proceeds directly to searching against the passport again, questioning, then onward to searching the watch list), the first method being different than the second method (both methods are different).

Regarding **claim 20**, *Kyle* discloses wherein the first method (the first method going from ("YES" " after "Does Face match Passport ?" at fig. 10 proceeds directly to searching the watch list) is stricter ("stricter" in the sense of less steps to finish the fig. 10 algorithm) than the second method (the second method going from ("NO" " after "Does Face match Passport ?" at fig. 10 proceeds directly to searching against the passport again, questioning, then onward to searching the watch list).

Claim Rejections - 35 U.S.C. § 103

[5] The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[6] **Claims 2, 11-13, 15, and 19-20** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kyle* in view of At the Airport, Immigration Wants to See Your Palm, New York Times, Frank J. Priol, Sep. 17, 1993 (hereinafter "Priol"). *Kyle* priority to Prov. App. No. 60/381905 (filed May 20, 2002)

Regarding **claim 2**, while *Kyle* discloses a personal authentication apparatus (fig. 5) for certifying a user ("user's identity" at para.0019), comprising:

a memory (*e.g.*, fig. 7, items 15, 34) storing a template face-picture ("passenger's facial template" at para.0080) of the user therein, and a face-picture of a particular person who is categorized as of a special concern ("watch list" database" at para.0085);

an image pickup unit (fig. 4, item 22) taking a face-picture (*e.g.*, fig. 8) of said user ("user's identity" at para.0019);

a particular person comparing unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) comparing ("Verify Face to Passport" at fig. 10) said user's face-picture (*e.g.*, fig. 8) taken by said image pickup unit (fig. 4, item 22) with the template face-picture ("passenger's facial template" at para.0080), outputting as comparison result a degree of similarity therebetween ("YES", "NO" after "Does Face match Passport?" at fig. 10), and deciding whether said degree of similarity is higher than a predetermined value (the decision is made at fig. 10, said decision is inherently higher than a predetermined value);

a personal picture acquiring unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) for acquiring the template face-picture ("passenger's facial template" at para.0080) of the user from said memory (*e.g.*, fig. 7, items 15, 34); and

an authentication unit (fig. 2, item 20; fig. 5, item 25),

when said degree of similarity is higher ("YES" " after "Does Face match Passport?" at fig. 10) than said predetermined value (the decision is made at fig. 10, said decision is inherently higher than a predetermined value), deciding whether or not said user's face-picture taken by the image pick-up unit is identical ("Is the Face On the Watch List?" at fig. 10) with the face-picture of the particular person who is categorized as of the special concern ("watch list" database" at para.0085) by a first method (the first

method going from ("YES" " after "Does Face match Passport ?" at fig. 10 proceeds directly to searching the watch list), and

when said degree to similarity is lower ("NO" " after "Does Face match Passport ?" at fig. 10)) than said predetermined value (the decision is made at fig. 10, said decision is inherently higher than a predetermined value), deciding whether or not said user's face-picture taken by the image pick-up unit is identical with the face-picture of the particular person who is categorized as of the special concern (" 'watch list' database" at para.0085) of the user by a second method (the second method going from ("NO" " after "Does Face match Passport ?" at fig. 10 proceeds directly to searching against the passport again, questioning, then onward to searching the watch list), the second method being different from the first method (both methods are different),

Kyle does not disclose wherein the particular person comparing unit comparing said user's face-picture taken by said image pickup unit with the face-picture of the particular person, who is categorized as of the special concern AND then deciding whether or not said user's face-picture taken by the image pick-up unit is identical with the template face-picture of the user by the first and second methods (in other words, switching the comparisons (as all elements are present) of (i) the face-picture of the particular person, who is categorized as of the special concern; and (ii) the template face-picture).

Prial teaches a method that includes first deciding whether a face-picture of the particular person, who is categorized as of a special concern matches a user ("check to make sure that the holder is entering the country legally and is not being sought by law-enforcement agencies" at p. 1), and secondly deciding whether a template face-picture matches the user ("compares them

with the digitalized measurements embedded in the smart card to certify that he is who the card says he is" at p. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the particular person comparing unit of *Kyle* to include comparing the user with the face-picture of the particular person, who is categorized as of the special concern as taught by *Prial* AND for the authentication unit of *Kyle* to include comparing the user with the template face-picture as taught by *Prial* (i.e., switching the comparisons) as "[w]ith practice, the immigration part of the process can take 35 seconds, less than half the time an inspector needs to read a passport, check it against the agency's records, and stamps it". *Prial* at 2. In essence, subjecting the user and authorities to perform the immigration part (which includes the particular person, who is categorized as of the special concern comparison), then performing the passport part (which includes the user with the template face-picture) is more efficient in that if the immigration part takes less time than the passport part, the checkout/checkin procedure will take less overall time (by eliminating those criminals first before they proceed to the longer passport part).

Regarding **claim 11**, *Kyle* in view of *Prial* discloses further comprising a person deciding apparatus ("[t]his is typically a different database than the database used for verification purposes. . ." at ¶0085, emphasis added) installed in a place other than that of said personal authentication apparatus (fig. 5), deciding whether or not said user ("user's identity" at para.0019) is certified, wherein when said degree of similarity determined ("YES", "NO" after "Does Face match Passport ?" at fig. 10 wherein *Kyle* in view of *Prial* is the "watch list" search), said authentication unit transmits (fig. 5) said user's face picture ("image" in fig. 1A) taken by

the image pick-up apparatus (fig. 4, item 22) to said person deciding apparatus (“[t]his is typically a different database than the database used for verification purposes. . .” at ¶0085, emphasis added).

Regarding **claim 12**, *Kyle* in view of *Prial* discloses wherein the image pickup unit (fig. 4, item 22) includes a first image pickup unit (e.g., the right-most item 22 at fig. 4) and a second image pickup unit (e.g., the left-most item 22 at fig. 4),

the particular person comparing unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) compares the user's face-picture (e.g., fig. 8) taken by the first image pickup unit (e.g., the right-most item 22 at fig. 4) with the face-picture of the particular person (*Kyle* in view of *Prial* is the ‘watch list’ database” at ¶ 0085; i.e., switching “Verify Face to Passport” at fig. 10 with “Search on ‘Wanted’ Face Database” at fig. 10),

when said degree of similarity is not higher than said predetermined value (“NO” after “Does Face match Passport?” that is replaced with “NO” after “Is the Face On the Watch List?”) said authentication unit (fig. 2, item 20; fig. 5, item 25) decides whether or not the user's face-picture taken by the first image pickup unit (e.g., the right-most item 22 at fig. 4) is identical (the further matching at fig. 10) with the face-picture (e.g., fig. 8) of the user,

when said degree of similarity is higher than said predetermined value (“YES” after “Does Face match Passport?” that is replaced with “YES” after “Is the Face On the Watch List?”), said authentication unit (fig. 2, item 20; fig. 5, item 25) decides whether or not the user's face-picture taken by the second image pickup unit (e.g., the left-most item 22 at fig. 4) is identical (the further matching at fig. 10) with the face-picture of the user.

Regarding **claim 13**, *Kyle* in view of *Prial* discloses wherein the second image pickup unit (e.g., the left-most item 22 at fig. 4) generates a face-picture (the picture taken, e.g., fig. 8) having more amount of information (there is inherently a 50% chance that it will contain more information than the other face-picture taken) than that of the face-picture taken by said first image pickup unit (e.g., the right-most item 22 at fig. 4).

Regarding **claim 15**, *Kyle* in view of *Prial* discloses wherein the personal picture acquiring unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) acquires the face-picture (e.g., fig. 8) from said memory (the memory used to store the face-picture in fig. 8 on the computer) based on personal identification information (the images contain facial features of that person, which is “personal identification information”) of the user.

Regarding **claim 19**, claim 2 recites identical features as in claim 19. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 19.

Regarding **claim 20**, *Kyle* in view of *Prial* disclose wherein the first method (*Kyle* in view of *Prial* is “watch-list” comparison at “Verify Face to Passport” at fig. 10) is stricter (stricter in the sense the suspect may be immediately arrested after a matter of seconds if the user does not pass the initial watch-list test) than the second method (*Kyle* in view of *Prial* is passport comparison at “Search on ‘Wanted’ Face Database” at fig. 10).

[7] **Claims 4-5, 7** are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kyle* in view of *Prial* and U.S. Pub. No. 2001/0031072 (published Oct. 18, 2001, hereinafter “Dobashi et al.”).

Regarding **claim 4**, *Kyle* in view of *Prial* does not teach said authentication unit increasing the number of the features that are extracted from each of the user's face-picture and the face-picture taken by the image pick-up unit and the template face-picture of the user.

Dobashi et al. discloses a face image recognition apparatus (fig. 1) wherein an authentication unit (fig. 9, item 9) increases the number of the features (fig. 9, items 108, 109; ¶¶ 0070, 0071) that are extracted from each of the user's face-picture (fig. 9, item 105) taken by an image pick-up unit (*e.g.*, fig. 8, item 101) of the user (fig. 9, item 100).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for both the face-picture taken by the image pick-up unit and the template face-picture of the user of *Kyle* in view of *Prial* to increase the number of the features that are extracted as taught by *Dobashi et al.* "to provide a face image recognition apparatus, face image recognition method and passage control apparatus which can alleviate a lowering in the person recognition rate due to a variation in the face image caused by a variation in the standing position of a person and a variation in the face itself and recognize the face image with high precision.", *Dobashi et al.*, ¶ 0008.

Regarding **claim 5**, *Kyle* in view of *Prial* does not teach said authentication unit further acquires new features of appearance of the user to decide with more strict reference, and decides whether or not the user's face-picture taken by the image pick-up unit is identical with the template face-picture of the user using the newly acquired features.

Dobashi et al. discloses a face image recognition apparatus (fig. 1) wherein an authentication unit (fig. 9, item 9) further acquires new features of appearance (fig. 9, items 108, 109; ¶¶ 0070, 0071) of the user (fig. 9, item 100) to decide with more strict reference (¶¶ 0070,

0071 will thus create a “more strict reference”), and decides whether or not the user’s face-picture taken by a image pick-up unit (e.g., fig. 8, item 101) is identical with a template face-picture (“template prepared in advance” at ¶ 0094) of the user using the newly acquired features (fig. 9, item 107).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the authentication unit of *Kyle* in view of *Prial* to acquire new features of appearance of the user to decide with more strict reference, and decides whether or not the user’s face-picture taken by the image pick-up unit is identical with the template face-picture of the user using the newly acquired features as taught by *Dobashi et al.* “to provide a face image recognition apparatus, face image recognition method and passage control apparatus which can alleviate a lowering in the person recognition rate due to a variation in the face image caused by a variation in the standing position of a person and a variation in the face itself and recognize the face image with high precision.”, *Dobashi et al.*, ¶ 0008.

Regarding **claim 7**, *Kyle* in view of *Prial* does not teach the authentication unit changes the type of the features that are extracted from each of the user’s face-picture and the template face-picture of the user.

Dobashi et al. discloses a face image recognition apparatus (fig. 1) wherein an authentication unit (fig. 9, item 9) changes the type of the features (fig. 9, items 108, 109; ¶¶ 0070, 0071) that are extracted from each of the user’s face-pictures (fig. 9, item 105) and a template face-picture (“template prepared in advance” at ¶ 0094) of the user based upon the comparison result (“recognition rate” in ¶ 0071) by the particular person comparing unit (fig. 9, item 107).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the authentication unit of *Kyle* in view of *Prial* to change the type of the features that are extracted from each of the user's face-pictures and the template face-picture of the user based upon the comparison result by the particular person comparing unit as taught by *Dobashi et al.* "to provide a face image recognition apparatus, face image recognition method and passage control apparatus which can alleviate a lowering in the person recognition rate due to a variation in the face image caused by a variation in the standing position of a person and a variation in the face itself and recognize the face image with high precision.", *Dobashi et al.*, ¶ 0008.

[8] **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kyle* in view of *Prial* and U.S. Patent No. 5,781,650 (issued Jul. 14, 1998, hereinafter "Lobo").

Regarding **claim 3**, *Kyle* in view of *Prial* does not teach using the image pickup unit heightens resolution or gradation, taking the user's face-picture again, and said authentication unit deciding whether or not said user's face-picture having the enhanced resolution or gradation is identical with the face-picture of the user.

Lobo discloses an automatic feature detection and age classification of human faces in digital images (fig. 1B) that includes extracting wrinkle features ("STEP 3: COMPUTE WRINKLE ANALYSIS" in 23, line 49) by using an image pickup unit (fig. 1B, item 10) to heighten resolution ("...take higher resolution images..." in 23, line 65-24, line 5) or gradation and taking the user's face-picture again (the process of taking higher resolution images requires taking the user's face-picture again).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for

(i) the image pickup unit of *Kyle* in view of *Prial* to heighten resolution or gradation and taking the user's face-picture again, and

(ii) the authentication unit of *Kyle* in view of *Prial* to use the enhanced resolution or gradation image as one of its feature extractions to decide whether or not said user's face-picture having the enhanced resolution or gradation is identical with the face-picture of the user as taught by *Lobo* "...to provide a method of finding facial features exist from the detected human face...", 2:44-45 and "...to categorize age based on facial features, facial feature ratios and wrinkle analysis...", 2:49-50.

[6] **Claim 6, 9-10, and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kyle* in view of *Prial* and U.S. Pub. No. 2002/0176610 (published Nov. 28, 2002, *hereinafter* "Okazaki").

Regarding **claim 6**, while *Kyle* in view of *Prial* discloses the personal authentication apparatus as claimed in claim 2, wherein *Kyle* discloses the image pickup unit (fig. 1, item 10) takes the user's face-pictures as an animated image (e.g., fig. 8),

the personal picture acquiring unit (fig. 2, item 20; fig. 5, item 25; unit responsible for fig. 10) acquires the animated image of the face-pictures of the user from said memory (the memory used to store the face-picture in fig. 8 on the computer), when said degree of similarity is higher than said predetermined value, said authentication unit identifies a similar face (fig. 10), *Kyle* in view of *Prial* does not disclose when said degree of similarity is higher than said predetermined value, said authentication unit decides whether or not the user's face-picture taken by the image pick-up unit is identical with the template face-picture of the user by comparing a

plurality of frames in the animated image of said user's face-pictures taken by the image pick-up unit with a plurality of frames in the animated image of the template face-pictures of the user.

Okazaki discloses a face image recording system (fig. 4; fig. 6) wherein an authentication unit (fig. 6, item 30) decides whether or not the user's face-picture (fig. 3, item 44) taken by an image pick-up unit (fig. 3, item 2) is identical ("the processor 31 records this image" in ¶ 0087 to further allow the decision whether or not the user's face-picture is identical) with a template face-picture of the user by comparing a plurality of frames in the animated image (fig. 3, fig. 4, item 2; "video camera" in ¶ 0072) of the user's face-pictures (fig. 1, item 1) taken by the image pick-up unit (fig. 3, item 2) with a plurality of frames in the animated image of the template face-pictures of the user (fig. 17 wherein the animated image of the face-pictures of the user are the images from video taken over each login time).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the authentication unit of *Kyle* in view of *Prial* to disclose when said degree of similarity is higher than said predetermined value, said authentication unit decides whether or not the user's face-picture taken by the image pick-up unit is identical with the template face-picture of the user by comparing a plurality of frames in the animated image of said user's face-pictures taken by the image pick-up unit with a plurality of frames in the animated image of the template face-pictures of the user as taught by *Okazaki* "...to provide a face image recording apparatus, face image recording system, information management system, face image recording method, and information management method which minimize the system installation cost while maintaining a security level meeting an intended use, and which realize highly "convenient" person authentication which is readily used by a user.", *Okazaki*, ¶ 0018.

Regarding **claim 9**, while *Kyle* in view of *Prial* discloses the personal authentication apparatus as claimed in claim 2, wherein the personal authentication apparatus certifies that a plurality of users is the user respectively, said particular person comparing unit compares said user's face-picture taken by the image pickup unit with face-pictures of a plurality of the particular persons stored in memory (refer to references/arguments cited in Claim 2), *Kyle* in view of *Prial* does not teach

a log storing unit for storing information of when the certification for each of said users is performed and whether or not said degree of similarity is higher than a predetermined value, the information being associated with the user,

said authentication unit decides what standard should be used for deciding whether or not said users are the user using said information stored in said log storing unit.

Okazaki discloses a face image recording system (fig. 4; fig. 6) that teaches a log storing unit ("record a user's face image as log data" in ¶ 0003) for storing holding information of when the certification for each of said users is performed ("date and time" in ¶ 0135 is information associated with each user), the information being associated with the user (*intended usage*),

said authentication unit decides what standard (fig. 17; ¶ 0175) should be used for deciding whether or not said users are the user (fig. 6, items 34, 38) using said information stored in said log storing unit (*intended usage*).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of *Kyle* in view of *Prial* to disclose a log storing unit for storing information of when the certification for each of said users is performed and whether or not said

degree of similarity is higher than a predetermined value, the information being associated with the user, said authentication unit decides what standard should be used for deciding whether or not said users are the user using said information stored in said log storing unit as taught by *Okazaki* "...to provide a face image recording apparatus, face image recording system, information management system, face image recording method, and information management method which minimize the system installation cost while maintaining a security level meeting an intended use, and which realize highly "convenient" person authentication which is readily used by a user.", *Okazaki*, ¶ 0018.

Kyle in view of *Prial* and *Okazaki* would then inherently have a log holding unit that would store whether or not said degree of similarity is higher than a predetermined value when holding information of when the certification of each of said users is performed (from the personal picture acquiring unit of *Lin* in view of *Dobashi*).

Regarding **claim 10**, while *Kyle* in view of *Prial* and *Okazaki* discloses the personal authentication apparatus as claimed in claim 9, wherein each of said plurality of particular persons is the person of special concern (*refer to argument s. 12*), *Kyle* in view of *Prial* and *Okazaki* do not teach when said degree of similarity is higher than said predetermined value at plural times within a predetermined time, said authentication unit decides whether or not the user's face-picture taken by the image pick-up unit is identical with the template face-picture of the user by a standard stricter than the standard used therebefore.

Okazaki discloses a face image recording system (fig. 4; fig. 6) that teaches wherein each of the plurality of particular persons (fig. 6, items 34, 38) is the suspected person (fig. 4, item H), when said degree of similarity is determined at plural times within a predetermined time

("predetermined time" in ¶ 0087), the authentication unit (fig. 6, item 30) decides whether or not the user's face-picture taken by an image pick-up unit (fig. 3, item 2) is identical ("the processor 31 records this image" in ¶ 0087 to further allow the decision whether or not the user's face-picture is identical) with a template face-picture of the user by a standard stricter than the standard used theretofore.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of *Kyle* in view of *Prial* and *Okazaki* to disclose wherein when said degree of similarity is higher than said predetermined value at plural times within a predetermined time, said authentication unit decides whether or not the user's face-picture taken by the image pick-up unit is identical with the template face-picture of the user by a standard stricter than the standard used theretofore as taught by *Okazaki* "...to provide a face image recording apparatus, face image recording system, information management system, face image recording method, and information management method which minimize the system installation cost while maintaining a security level meeting an intended use, and which realize highly "convenient" person authentication which is readily used by a user.", *Okazaki*, ¶ 0018.

Kyle in view of *Prial* and *Okazaki* would then inherently have an authentication unit, when said degree of similarity is higher than said predetermined value (from the personal picture acquiring unit of *Kyle* in view of *Prial*), deciding whether or not said user's face-picture is identical with the face-picture of the user by a method stricter than the method used theretofore.

Regarding **claim 16**, while *Kyle* in view of *Prial* discloses the personal authentication apparatus as claimed in claim 15, *Kyle* in view of *Prial* does not disclose wherein the personal identification information of the user is acquired from an IC card of the user.

Okazaki discloses a face image recording system (fig. 4; fig. 6) that teaches wherein personal identification information (“personal identification” at ¶ 0009) of the user is acquired from an IC card (“IC card” at ¶ 0009) of the user.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of *Kyle* in view of *Prial* to include wherein the personal identification information of the user is acquired from an IC card of the user as taught by *Okazaki* “...to provide a face image recording apparatus, face image recording system, information management system, face image recording method, and information management method which minimize the system installation cost while maintaining a security level meeting an intended use, and which realize highly “convenient” person authentication which is readily used by a user.”, *Okazaki*, ¶ 0018.

[7] **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kyle* in view of *Prial* and U.S. Patent No. 5,163,094 (issued Nov. 10, 1992, *hereinafter* “Prokoski”).

Regarding **claim 8**, while *Kyle* in view of *Prial* disclose the personal authentication apparatus as claimed in claim 3, wherein when said degree of similarity is higher than said predetermined value, said image pickup unit takes said user’s face picture by irradiating light (it is inherent the room is not completely dark) to said user (refer to references/arguments cited in Claims 2), *Kyle* in view of *Prial* do not teach wherein said image pickup unit takes the user’s face-picture by irradiating an invisible light to the user, said authentication unit decides whether or not the user’s face-picture taken by the image pick-up unit is identical with the template face-picture of the user using the user’s face-picture taken by irradiation of the invisible light.

Prokoski discloses a method for identifying individuals from analysis of internal shapes derived from biosensor data (fig. 1) that includes extracting infrared features (4:43-46; fig. 5) by using an image pickup unit (fig. 1, item 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for

the image pickup unit of *Kyle* in view of *Prial* and *Lobo* to irradiate an invisible light (infrared) to the user, and

the "identical" test between the user's face-picture taken by the image pick-up image and the template face-picture of *Kyle* in view of *Prial* to use the infrared image as one of its feature extractions to decide whether they are identical as taught by *Prokoski* "...to provide a method for identifying individuals from biosensor data.", column 3:19-21.

[8] **Claims 14 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Kyle* in view of *Prial* and U.S. Pub. No. 2002/0167403 (published Nov. 14, 2002, hereinafter "Colmenarez").

Regarding **claim 14**, while *Kyle* in view of *Prial* discloses the personal authentication apparatus as claimed in claim 2, *Kyle* in view of *Prial* does not teach wherein said personal authentication apparatus is coupled to another personal authentication apparatus that is provided separately along the path through which said user passes, and wherein when said degree of similarity is decided higher than a predetermined value, said authentication unit acquires the user's face-picture from said another personal authentication apparatus, and decides whether or not the user's face-picture taken by the image pickup unit is identical with the template face-

picture of the user using said user's face-picture acquired by said another personal authentication apparatus.

Colmenarez discloses an automatic system for monitoring persons entering and leaving changing rooms (fig. 1) wherein a personal authentication apparatus (fig. 1, items 5, 10) is coupled to another personal authentication apparatus (fig. 1, item 5, 15) that is provided separately along the path though which a user passes (fig. 1, item 65), and wherein when a degree of similarity is determined, a authentication unit acquires the user's face-picture (fig. 1, item 20) from said another personal authentication apparatus, and decides whether or not the user's face-picture taken by the image pickup unit (fig. 1, item 10) is identical with a template face-picture of the user using said user's face-picture ("face-recognition is used" in ¶ 0009) acquired by said another personal authentication apparatus.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of *Kyle* in view of *Prial* to include wherein said personal authentication apparatus is coupled to another personal authentication apparatus that is provided separately along the path though which said user passes, and wherein when said degree of similarity is decided higher than a predetermined value, said authentication unit acquires the user's face-picture from said another personal authentication apparatus, and decides whether or not the user's face-picture taken by the image pickup unit is identical with the template face-picture of the user using said user's face-picture acquired by said another personal authentication apparatus as taught by *Colmenarez* so that "...the problem of comparing customer data is reduced to a comparison of images of the entering and leaving customers.", *Colmenarez*, ¶ 0030.

Kyle in view of *Prial* and *Okazaki* would then inherently have a log holding unit that would store whether or not said degree of similarity is higher than a predetermined value when holding information of when the certification of each of said users is performed (from the personal picture acquiring unit of *Lin* in view of *Dobashi*).

Regarding **Claim 18**, while *Kyle* in view of *Prial* and *Colmenarez* discloses the personal authentication apparatus as claimed in Claim 14, *Kyle* in view of *Prial* and *Colmenarez* do not disclose wherein said user's face-picture acquired from said another personal authentication unit comprises a face-picture taken before said user has passed through the path.

Colmenarez discloses an automatic system for monitoring persons entering and leaving changing rooms (fig. 1) that teaches wherein said user's face-picture acquired from said another personal authentication unit (fig. 1, item 5, 15) comprises a face-picture taken before (The another personal authentication unit takes two pictures, one before and after the dressing room. The second time the user passes through the path, the face-picture was taken beforehand when he passed through the first time.) said user has passed through the path (fig. 1, element 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of *Kyle* in view of *Prial* to include wherein said user's face-picture acquired from said another personal authentication unit comprises a face-picture taken before said user has passed through the path as taught by *Colmenarez* so that "...the problem of comparing customer data is reduced to a comparison of images of the entering and leaving customers.", *Colmenarez*, ¶ 0030.

[9] **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over *Kyle* in view of *Prial*, *Dobashi et al.*, and *Colmenarez*.

Regarding **claim 17**, while *Kyle* in view of *Prial* and *Dobashi et al.* discloses the personal authentication apparatus as claimed in claim 5, wherein said newly acquired features comprises features included in a body picture of said user (fig. 1, item 1), *Kyle* in view of *Prial* and *Dobashi et al.* do not teach a whole body picture.

Colmenarez discloses an automatic system for monitoring persons entering and leaving changing rooms (fig. 1) that teaches wherein newly acquired features comprises features included in a whole body picture of said user (the line-of-sight of items 10,15 are represented by dashed lines in fig. 1, which include the whole body picture).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the newly acquired features comprising features included in a body picture of said user of *Kyle* in view of *Prial* and *Dobashi et al.* to be a whole body picture of said user as taught by *Colmenarez* so that "...the problem of comparing customer data is reduced to a comparison of images of the entering and leaving customers.", *Colmenarez*, ¶ 0030 and "the height, body size, gait, and other features of the person may be classified and compared for the entering and leaving video signals to insure they are of the same person.", *Colmenarez*, ¶ 0010.

Conclusion

[9] The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 6335688 B1; US 20030126121 A1; US 6628811 B1.

[9] Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

[10] Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID P. RASHID whose telephone number is (571)270-1578. The examiner can normally be reached Monday-Friday 7:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikram Bali can be reached on (571) 272-74155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Rashid/
Examiner, Art Unit 2624

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